

PATENT COOPERATION TREATY



PCT

INTERNATIONAL PRELIMINARY EXAMINATION REPORT

Rec'd PCT/PTO

9 MAR 2006

(PCT Article 36 and Rule 70)

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| Applicant's or agent's file reference 154906.1/Le/mb | FOR FURTHER ACTION See Notification of Transmittal of International Preliminary Examination Report (Form PCT/IPEA/416) | |
| International application No. PCT/CH2003/000612 | International filing date (day/month/year) 10 September 2003 (10.09.2003) | Priority date (day/month/year) |
| International Patent Classification (IPC) or national classification and IPC G06N 3/04, 3/08, G06F 17/60 | | |
| Applicant SWISS REINSURANCE COMPANY | | |

1. This international preliminary examination report has been prepared by this International Preliminary Examining Authority and is transmitted to the applicant according to Article 36.

2. This REPORT consists of a total of 5 sheets, including this cover sheet.

This report is also accompanied by ANNEXES, i.e., sheets of the description, claims and/or drawings which have been amended and are the basis for this report and/or sheets containing rectifications made before this Authority (see Rule 70.16 and Section 607 of the Administrative Instructions under the PCT).

These annexes consist of a total of 6 sheets.

3. This report contains indications relating to the following items:

- I Basis of the report
- II Priority
- III Non-establishment of opinion with regard to novelty, inventive step and industrial applicability
- IV Lack of unity of invention
- V Reasoned statement under Article 35(2) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement
- VI Certain documents cited
- VII Certain defects in the international application
- VIII Certain observations on the international application

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|---|--|
| Date of submission of the demand 19 June 2004 (19.06.2004) | Date of completion of this report 03 December 2004 (03.12.2004) |
| Name and mailing address of the IPEA/BP | Authorized officer |
| Facsimile No. | Telephone No. |

INTERNATIONAL PRELIMINARY EXAMINATION REPORT

International application No.

PCT/CH2003/000612

I. Basis of the report

1. With regard to the elements of the international application:^{*}

the international application as originally filed

the description:

pages _____ 1-28 _____, as originally filed
 pages _____ _____, filed with the demand
 pages _____, filed with the letter of _____

the claims:

pages _____ _____, as originally filed
 pages _____, as amended (together with any statement under Article 19)
 pages _____, filed with the demand
 pages _____ 1-23 _____, filed with the letter of 03 November 2004 (03.11.2004)

the drawings:

pages _____ 1/7-7/7 _____, as originally filed
 pages _____ _____, filed with the demand
 pages _____, filed with the letter of _____

the sequence listing part of the description:

pages _____ _____, as originally filed
 pages _____, filed with the demand
 pages _____, filed with the letter of _____

2. With regard to the language, all the elements marked above were available or furnished to this Authority in the language in which the international application was filed, unless otherwise indicated under this item.

These elements were available or furnished to this Authority in the following language _____ which is:

the language of a translation furnished for the purposes of international search (under Rule 23.1(b)).
 the language of publication of the international application (under Rule 48.3(b)).
 the language of the translation furnished for the purposes of international preliminary examination (under Rule 55.2 and/or 55.3).

3. With regard to any nucleotide and/or amino acid sequence disclosed in the international application, the international preliminary examination was carried out on the basis of the sequence listing:

contained in the international application in written form.
 filed together with the international application in computer readable form.
 furnished subsequently to this Authority in written form.
 furnished subsequently to this Authority in computer readable form.
 The statement that the subsequently furnished written sequence listing does not go beyond the disclosure in the international application as filed has been furnished.
 The statement that the information recorded in computer readable form is identical to the written sequence listing has been furnished.

4. The amendments have resulted in the cancellation of:

the description, pages _____
 the claims, Nos. _____
 the drawings, sheets/fig _____

5. This report has been established as if (some of) the amendments had not been made, since they have been considered to go beyond the disclosure as filed, as indicated in the Supplemental Box (Rule 70.2(c)).^{**}

* Replacement sheets which have been furnished to the receiving Office in response to an invitation under Article 14 are referred to in this report as "originally filed" and are not annexed to this report since they do not contain amendments (Rule 70.16 and 70.17).

** Any replacement sheet containing such amendments must be referred to under item 1 and annexed to this report.

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V. Reasoned statement under Article 35(2) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement

1. Statement

| | | | |
|-------------------------------|--------|------|-----|
| Novelty (N) | Claims | 1-23 | YES |
| | Claims | | NO |
| Inventive step (IS) | Claims | 1-23 | YES |
| | Claims | | NO |
| Industrial applicability (IA) | Claims | 1-23 | YES |
| | Claims | | NO |

2. Citations and explanations

1. This report makes reference to the following document:

D1: US-A-5 761 442 (BARR DEAN S ET AL) 2 June 1998
 (1998-06-02)

2. Novelty and inventive step (PCT Article 33(2) and (3))

2.1 D1, which is considered to represent the prior art closest to the subject matter of claim 1, discloses (the references in parentheses are to this document):

Computer-aided system for determining future development values, wherein the system for determining development values comprises at least one neural network and historic development values are used to forecast future development values (column 4, line 20-42).

The subject matter of claim 1 thus differs from the system known from D1 in that the system specified in claim 1 is suitable for establishing experience

ratings and risk reserves and comprises iteratively generated neural networks for each time interval in order to determine the future development values of an event, wherein each successive neural network depends recursively on the preceding neural network.

The subject matter of Claim 1 is therefore novel (PCT Article 33(2)).

The problem addressed by the present invention may therefore be considered that of providing a means of forecasting the future development values of an event generally accurately over a substantial period.

The solution to this problem proposed in claim 1 of the present application involves an inventive step (PCT Article 33(3)). The reasons are: the prior art neither discloses nor suggests the iterative generation of neural networks for the purpose of forecasting future values.

- 2.2 Claims 2-6 are dependent on claim 1 and therefore likewise meet the PCT requirements for novelty and independent step.
- 2.3 The same reasoning applies to the corresponding independent process and computer program product claims 7, 17 and 23 and to claims 8-12 and 18-22, which are dependent on claims 7 and 17.
- 2.4 The combination of features contained in independent claims 13 and 15 and in claims 14 and 16, which are dependent thereon, is neither known from nor suggested by the available prior art. Said claims

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therefore appear to meet the PCT requirements for novelty and inventive step.